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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/606,003 | 06/24/2003 | Samir S. Ahmad | H0004229 | 5987 |

7590 10/14/2004

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EXAMINER

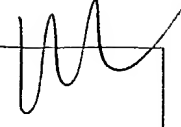
TRIEU, THAI BA

| ART UNIT | PAPER NUMBER |
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3748

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---|--|
| Office Action Summary | Application No. 10/606,003 | Applicant(s) AHMAD, SAMIR S.  | |
| | Examiner Thai-Ba Trieu | Art Unit 3748 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-26 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>06/08/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Office Action is in response to the amendment filed on June 30, 2004. Applicant's cooperation in amending the claims to overcome the claim objections relating to informalities is appreciated. Claims 14-26 were amended. Applicant's arguments, see Pages 7-10, filed June 30, 2004, with respect to the rejection(s) of claim(s) 1, 2, 4, 15, 16, 17, 19, 20, 22, 24, and 25 under 35 U.S.C. 102, as anticipated by US Patent Number 5,440,879 to Dellora, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn, and the indicated allowable claims 3, 5-14, 18, 21, 23, and 26 has been also withdrawn.

However, upon further consideration, a new ground(s) of rejection is set forth below

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 4, 13-15, and 17-20 are rejected under 35 U.S.C. 102(b) as best understood as being anticipated by Berger et al. (Patent Number 5,121,604).

Regarding claims 1, 3, 4, and 13-15, Berger discloses a controlling a variable-geometry mechanism in a turbocharger for an engine, comprising:

a logic arrangement structured and arranged to sample a desired control value representing a desired operating condition in which the turbocharger is to be operated (See Column 1, lines 29-44), and

to sample a previous desired control value (P_{Ld}) representing the desired control value determined in a previous sample period,

the logic arrangement being further structured and arranged to determine a first difference parameter as the difference between the desired control value and the previous desired control value and to produce a control signal output based on said first difference parameter, such that the control signal output has a first value when said first difference parameter is greater than a predetermined first threshold and has a second value different from the first value when said first difference parameter is not greater than the predetermined first threshold (See Figures 2 and 5-6, Column 1, lines 29-44, Column 2, lines 22-68, Column 3, lines 1-3);

wherein the logic arrangement is structured and arranged to provide the first value as a pulse of predetermined amplitude and duration (See Column 3, lines 15-35);

wherein the logic arrangement is structured and arranged to determine the amplitude and duration of the pulse as a function of ambient conditions (Read as the different air quantities) (Column 1, lines 29-44);

wherein the logic arrangement is structured and arranged to cause the control signal output to have the second value upon expiration of the duration of

the pulse (See Figures 2 and 5-6, Column 1, lines 29-44, Column 2, lines 22-68, Column 3, lines 1-68, and Column 4, lines 1-13);

a memory structured and arranged to store the previous desired control value and to supply the previous desired control value to the logic arrangement, wherein the memory is structured and arranged to filter the stored previous desired control value (Column 4, lines 1-53); and

an actuator (26) operable to adjust the variable-geometry mechanism, the actuator being arranged to receive the control signal output from the logic arrangement (See Figure 1, Column 2, lines 4-40).

Regarding claims 17-20, the method as claimed would be inherent during the normal use and operation of the Berger device as disclosed (See Figures 1-2 and 5-6, Column 1, lines Column 1, lines 29-44, Column 2, lines 22-68, Column 3, lines 1-68, and Column 4, lines 1-13).

Claims 1, 2, 4-8, 10-16 and 18-24 are rejected under 35 U.S.C. 102(b) as best understood as being anticipated by Buratti et al. (Patent Number EP 0 786 589 A1/ US 5,867,986).

Regarding claims 1-2, 4-8, and 10-16, Buratti discloses a controlling a variable-geometry mechanism in a turbocharger for an engine, comprising:

a logic arrangement structured and arranged to sample a desired control value representing a desired operating condition in which the turbocharger is to be operated (See Abstract), and

to sample a previous desired control value representing the desired control value determined in a previous sample period,

the logic arrangement being further structured and arranged to determine a first difference parameter as the difference between the desired control value and the previous desired control value and to produce a control signal output based on said first difference parameter, such that the control signal output has a first value when said first difference parameter is greater than a predetermined first threshold and has a second value different from the first value when said first difference parameter is not greater than the predetermined first threshold; wherein the logic arrangement is structured and arranged to provide the first value as a pulse of predetermined amplitude and duration (See Figure 3, Column 2, lines 33-59, and Column 3, lines 1-6);

wherein the logic arrangement is structured and arranged to determine the amplitude and duration of the pulse as a function of said first difference parameter (See Figure 3, Column 2, lines 33-59, and Column 3, lines 1-6); and

wherein the logic arrangement is structured and arranged to cause the control signal output to have the second value upon expiration of the duration of the pulse (See Figure 3, Column 3, lines 40-58, Column 4, lines 1-7, claim 4); and the logic arrangement including a switch (32) structured and arranged to switch between first and second conditions, the switch in the first condition outputting the

control signal output having the first value, the switch in the second condition outputting the control signal output having the second value, the logic arrangement being structured and arrangement being structured and arranged to provide a switching signal to the switch for switching between the first and second conditions (See Figure 3, Column 4, lines 48-58, and Column 5, lines 1-17);

wherein the second value for the control signal output comprises a normal control signal, and further comprises a controller structured and arranged to produce the normal control signal for driving the turbocharger from a current operating condition toward the desired operating condition (See Figure 5, Column 6, lines 13-23);

wherein the controller comprises an open loop controller (See Figure 23); and

wherein the open loop controller is structured and arranged to produce the normal control signal as a function of engine speed and degree of loading on the engine (See Column 6, lines 1-8);

wherein the controller comprising a closed loop controller receiving a feedback signal and determining the normal control signal based on the feedback signal (See Column 6, lines 1-8);

wherein the logic arrangement is structured and arranged to sample an actual control value representing an actual operating condition of the turbocharger and to determine a second difference parameter as the difference between the desired control value and the actual control value, the logic

arrangement producing the control signal output at the first value when either the first difference parameter is greater than the first threshold or the second difference parameter is greater than the second threshold (See Column 4, lines 52-59, Column 5, lines 1-17, and Claim 7); and

a sensor (18) operable to detect the actual operating condition and to produce the actual control value and supply control value to the logic arrangement (See Figure 2);

a memory (19, 20) structured and arranged to store the previous desired control value and to supply the previous desired control value to the logic arrangement, wherein the memory is structured and arranged to filter the stored previous desired control value (See Column 2, lines 5-16);

an actuator (10) operable to adjust the variable-geometry mechanism, the actuator being arranged to receive the control signal output from the logic arrangement (See Figure 2).

Regarding claims 17 and 19-26, the method as claimed would be inherent during the normal use and operation of the Buratti device as disclosed (See Figures 2-3 and 5; Abstract; Column 2, lines 5-16 and 33-59; Column 3, lines 1-6; Column 4, lines 52-59; Column 5, lines 1-17, and Claim 7; Column 6, lines 1-8 and 13-23).

Allowable Subject Matter

Claims 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The IDS (PTO-1449) filed on June 08, 2004 has been considered. An initialized copy is attached hereto.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Caddy (Patent Number 6,718,767 B1) discloses a method and a unit for controlling the supercharger pressure of a turbo-diesel engine with a variable geometry turbine.

- Buck et al. (Patent number 4,597,265) discloses a control system for air charge pressure in an internal combustion engine.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai-Ba Trieu whose telephone number is (703) 308-6450. The examiner can normally be reached on Monday - Thursday (6:30-5:00).

However, the examiner's new telephone number (751) 272-4867 will become effective after the expected changeover date of November 22, 2004.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas E. Denion can be reached on (703) 308-2623. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTB
September 24, 2004


Thai-Ba Trieu
Patent Examiner
Art Unit 3748